

REMARKS

Summary of the Office Action

In the Office Action dated June 19, 2003, claims 1-8 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Japanese Patent Application Publication No. JP 11227220 A (with English Translation) of Shinada Satoshi (hereinafter "Shinada") in view of Japanese Patent Application Publication No. JP 10315493 A of Fujimoto Hitoshi (hereinafter "Fujimoto").

Summary of the Response to the Office Action

Applicants amend claims 1 and 7 to improve the form of these claims. Applicants add new claims 19-29 to describe differently the subject matter of the invention. Accordingly, claims 1-29 are now pending in this application, with claims 1-8 and 19-29 under consideration.

The Rejections under 35 U.S.C. § 103(a)

Claims 1-8 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Shinada in view of Fujimoto. Applicants amend claims 1 and 7 to improve the form of these claims and not to overcome any cited art. Applicants further submit that no subject matter is being relinquished by this amendment.

Applicants respectfully submit that neither Shinada nor Fujimoto, whether taken singly or in combination, teaches or suggests the inkjet recording apparatus including the features recited in independent claims 1 and 7. Accordingly, Applicants traverse the rejection of claims 1-8

under 35 U.S.C. § 103(a) and the Office Action's interpretation of the applied references for the following reasons. Applicants file concurrently herewith English Translations of Shinada and Fujimoto.

The Office Action asserts that the supply means (200) of Shinada supplies ink from the main tank (300) to the ink tank (10) when the recording head is disposed at an ink supplying position. Applicants respectfully submit that, in contrast to the instant invention, the operation of the supply means in the arrangement of Shinada is controlled by a supply control means which is operated according to instructions from an operation means or by detecting signals from a switch (30) which is a switch for stopping the supply of ink.

Furthermore, the Office Action asserts that Shinada discloses a state "when the remaining ink amount detected by the detecting means (40) is above a lower limit (any range or amount can be set for a predetermined value)." Applicants respectfully submit that Shinada merely discloses presetting the amount of ink to be supplied in such a manner that the amount of ink supplied will be slightly more than a calculated result. Moreover, Applicants respectfully submit that, as discussed in Shinada at paragraph [0030], the calculated result of Shinada is the sum of the number of dots ejected, and the number of dots corresponding to an amount of ink discharged. Accordingly, Applicants respectfully submit that Shinada does not disclose supplying ink when the remaining ink amount detected by the detecting means is above a lower limit (a predetermined value).

Moreover, Applicants further submit that, in contrast to Shinada, the instant invention recites supplying ink when the remaining ink amount detected by the detecting means is above a lower limit. Thus, Applicants respectfully submit that the instant invention has at least the following prominent effects. A period of time between the time at which ink is supplied to the

ink tank to an upper limit and the time at which the amount of ink remaining in the ink tank is detected can be extended. Further, before the amount of ink reaches the lower limit, ink is supplied to the ink tank in an amount corresponding to the amount of ink that has been used. Accordingly, Applicants submit that a large amount of ink is constantly held in the ink tank. Moreover, Applicants respectfully submit that it is possible to reduce the possibility of image defects caused by shortage of ink during a printing processing for a print job with a large coverage area requiring a large amount of ink. Accordingly, Applicants respectfully submit that the probability of the printing processing being interrupted by the operation of the ink supply operation significantly decreases, and, as a result, throughput can be improved.

As pointed out in MPEP § 2143.03, “[to] establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).” Thus, Applicants respectfully submit that claims 1 and 7 are patentable over the combination of Shinada and Fujimoto. Moreover, Applicants submit that dependent claims 2-6 and 8 should be allowed for at least the same reasons as set forth above with regard to independent claims 1 and 7 upon which they depend, respectively. Accordingly, Applicants respectfully request that the rejection of claims 1-8 under 35 U.S.C. § 103(a) be withdrawn.

New Claims 19-29 Are Patentable

Applicants add new claims 19-29 to describe differently the subject matter of the invention. Applicants respectfully submit that no new matter is being introduced by these claims as they are supported by the original disclosure in the application as filed. Applicants respectfully submit that the newly added claims are allowable over the cited references.

Conclusion

In view of the foregoing, Applicants respectfully request reconsideration, withdrawal of all rejections and objections, and the timely allowance of all pending claims. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicants' undersigned representative to expedite prosecution.

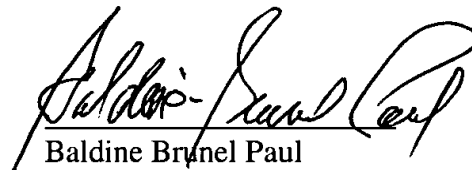
If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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Dated: October 1, 2003

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